WO 01/21816 PCT/US00/25877 -1-

SEQUENCE LISTING

	Isis Innovation Limited Beth Israel Deaconess Medical Center, Inc. Donnadieu, Emmanuel Jouvin, Marie-Helene Kinet, Jean-Pierre Cookson, William Moffatt, Miriam Fleur				
<120>	MODULATION OF IGE RECEPTOR CELL SURFACE EXPRESSION				
<130>	I0308/7000WO/ERP/KA				
	US 60/154,924 1999-09-21				
<160>	9				
<170>	FastSEQ for Windows Version 3.0				
<212>	3729				
<220> <221> CDS <222> (103)(837)					
	aactgcctat tcagagcatg cagtaagagg aaatccacca agtctcaata 60				
tadtadtatt	ctttattcct ggacagctcg gttaatgaaa aa atg gac aca gaa 114 Met Asp Thr Glu 1				
agt aat agg	Met Asp Thr Glu				
agt aat agg Ser Asn Arg 5 cct gca ttt	Met Asp Thr Glu 1 g aga gca aat ctt gct ctc cca cag gag cct tcc agt gtg g Arg Ala Asn Leu Ala Leu Pro Gln Glu Pro Ser Ser Val				
agt aat agg Ser Asn Arg 5 cct gca ttt Pro Ala Phe	Met Asp Thr Glu 1 g aga gca aat ctt gct ctc cca cag gag cct tcc agt gtg g Arg Ala Asn Leu Ala Leu Pro Gln Glu Pro Ser Ser Val 10 15 20 g aga gtc ttg gaa ata tct ccc cag gaa gta tct tca ggc g Glu Val Leu Glu Ile Ser Pro Gln Glu Val Ser Ser Gly				
agt aat agg Ser Asn Arg 5 cct gca ttt Pro Ala Phe aga cta ttg Arg Leu Leu gtt ttg aaa	Met Asp Thr Glu 1 g aga gca aat ctt gct ctc cca cag gag cct tcc agt gtg Arg Ala Asn Leu Ala Leu Pro Gln Glu Pro Ser Ser Val 10 15 20 g aga gtc ttg gaa ata tct ccc cag gaa gta tct tca ggc Glu Val Leu Glu Ile Ser Pro Gln Glu Val Ser Ser Gly 25 g aag tcg gcc tca tcc cca cca ctg cat aca tgg ctg aca Lys Ser Ala Ser Ser Pro Pro Leu His Thr Trp Leu Thr 40 45 a aaa gag cag gag ttc ctg ggg gta aca caa att ctg act 306 31 32 336 34 35 36 36 36 37 38 38 39 30 30 30 30 30 30 30 30 30				
agt aat agg Ser Asn Arg 5 cct gca ttt Pro Ala Phe aga cta ttg Arg Leu Leu gtt ttg aaa Val Leu Lys 55 gct atg ata	Met Asp Thr Glu 1 g aga gca aat ctt gct ctc cca cag gag cct tcc agt gtg Arg Ala Asn Leu Ala Leu Pro Gln Glu Pro Ser Ser Val 10 15 20 g aga gtc ttg gaa ata tct ccc cag gaa gta tct tca ggc Glu Val Leu Glu Ile Ser Pro Gln Glu Val Ser Ser Gly 25 g aag tcg gcc tca tcc cca cca ctg cat aca tgg ctg aca Lys Ser Ala Ser Ser Pro Pro Leu His Thr Trp Leu Thr 40 45 a aaa gag cag gag ttc ctg ggg gta aca caa att ctg act 306 31 32 336 34 35 36 36 36 37 38 38 39 30 30 30 30 30 30 30 30 30				

WO 01/21816 PCT/US00/25877

WO 01/21816				PC 1/USU	//258// _.
		-2-			
cca ttc tgg gga		ttt tct att			450
Pro Phe Trp Gly	105	110		115	
ata tct gaa agg Ile Ser Glu Arg 120					498
gca aac act gcc Ala Asn Thr Ala 135					546
atc atc aac ctg Ile Ile Asn Leu 150					594
cag aaa ttt ttt Gln Lys Phe Phe 165					642
att gta gtg atg Ile Val Val Met			Leu Gly Leu		690
gtg tca ctc aca Val Ser Leu Thr 200					738
gtt cca gag gat Val Pro Glu Asp 215					786
tac agt gag ttg Tyr Ser Glu Leu 230					834
taa gaatcacgtg t	tocagaacac to	ctgattcac ac	ccaaggat cca	gaaggcc	887
aaggitttgt taagg	-				947
cattagattt attc	gcctga taagaa	atatt ttgttt	ctgc tgcttct	gtc caccttaata	1007
tgctccttct attt	gtagat atgata	agact cctatt	tttc ttgtttt	ata ttatgaccac	1067
acacatetet getge					1127
gtgcaaatac agaaa					1187
aatatttggt tetta gatttgtace ateca					1247 1307
cactatatat aacti					1367
gacatgaagt tttat	_		_		1427
gatattattt gcaga					1487
tggggaggta aatag					1547
atgtttagtg aaaca					1607
tgacgtggaa atgga	aaataa tggtta	atato taaaa	atgt agaaaaa	gag taactggtag	1667
attttgttaa caaa					1727
cgtttgagtc taaga					1787
gggcgcggag gctca gaagtcagta gttt					1847 1907
acaaaaaaaa aatta					1967
atgaggcagg agaat					2027
cagtgcactc cage					2087
aaaagataaa aagt	cagaaa tctga	aaagt ggagga	agag tacaaat	aga cctaaattaa	2147
gtctcatttt ttgg					2207
atgacatcca ataca ataagagaaa tcat	atgagt tctgg	taaag ataaaa	atttg atacacg	gtt tggtgtcatt	2267 2327
acaayayaaa ccat	caccaa acyaa	goddy claata	.c.c. aayayaa	ccu ccccyayaca	2321

qaaqtgaagc taagctaaac ttcacatgcc tataattgga gggaaaaact aaggataaaa 2387 tctaqcctag aagatacaat aattagtcat aaacatgcat tgtgaaactg tagagagcag 2447 qtaqcccaaa atagagaaag attagataaa gagaaaataa gtatccatca gagacagtat 2507 ctctaggctt qqqcaaqaga aaagtccaca qtqataaqca actccaccta aggcatgaat 2567 atgcqqcaqa qaaaacaqca atagtqaatq aatgcaaaaq qtqctqaqca aattccacac 2627 atqaqtattq tqcatqaqta aatqaataaa acatttqcaa agacctttaq agaaaqaqaa 2687 tgggagcata tgtgcgaaat aagatagttg attatgaata gaaggtagtg aagaaaagca 2747 agctaagaaa aaattctgtt tataaaagaa ggaaaagata gtttatgttt ttagcctaag 2807 tataaqaqtc ctacagatgg actgaaaaaa atcagtctga gagtattagt cacaattaat 2867 2927 gaaataatta cattttatgt attgaggatg ccaagattaa aaggtgacag gtagatgtta atttccctag attgtgaaag tgatcacgac aatcacacaa caaataatta agtgacttgg 2987 tatgetttat ttaattgtag ggeetgaggt ttteeattet cattttteta aaatacaatt " 3047 ttqtttctcc aaatttqaca qcaqaataaa aaccctaccc tttcactgtg tatcatgcta 3107 agctgcatct ctactcttga tcatctgtag gtattaatca catcacttcc atggcatgga 3167 tqttcacata caqactctta accetqqttt accaqgacct ctaggagtgg atccaatcta 3227 tatctttaca gttgtatagt atatgatatc tcttttattt cactcaattt atattttcat 3287 3347 cattgactac atatttctta tacacaacac acaatttatg aatttttct caagatcatt ctgagagttg ccccacccta cctgcctttt atagtacgcc cacctcaggc agacacagag 3407 cacaatgctg gggttctctt cacactatca ctgccccaaa ttgtctttct aaatttcaac 3467 ttcaatgtca tcttctccat gaagaccact gaatgaacac cttttcatcc agccttaatt 3527 tcttqctcca taactactct atcccacgat gcagtattgt atcattaatt attagtgtgc 3587 ttgtgacctc cttatgtatt ctcaattacc tgtatttgtg caataaattg gaataatgta 3647 3707 acttgatttc ttatctgtgt ttgtgttggc atgcaagatt taggtactta tcaagataat ggggaattaa ggcatcaata aa 3729

<210> 2

<211> 244

<212> PRT

<213> Homo sapiens

<400> 2

Met Asp Thr Glu Ser Asn Arg Arg Ala Asn Leu Ala Leu Pro Gln Glu Pro Ser Ser Val Pro Ala Phe Glu Val Leu Glu Ile Ser Pro Gln Glu 25 Val Ser Ser Gly Arg Leu Leu Lys Ser Ala Ser Ser Pro Pro Leu His Thr Trp Leu Thr Val Leu Lys Lys Glu Gln Glu Phe Leu Gly Val Thr 55 Gln Ile Leu Thr Ala Met Ile Cys Leu Cys Phe Gly Thr Val Val Cys 70 Ser Val Leu Asp Ile Ser His Ile Glu Gly Asp Ile Phe Ser Ser Phe Lys Ala Gly Tyr Pro Phe Trp Gly Ala Ile Phe Phe Ser Ile Ser Gly 100 105 Met Leu Ser Ile Ile Ser Glu Arg Arg Asn Ala Thr Tyr Leu Val Arg 125 120 115 Gly Ser Leu Gly Ala Asn Thr Ala Ser Ser Ile Ala Gly Gly Thr Gly 135 Ile Thr Ile Leu Ile Ile Asn Leu Lys Lys Ser Leu Ala Tyr Ile His 150 155 145 Ile His Ser Cys Gln Lys Phe Phe Glu Thr Lys Cys Phe Met Ala Ser 170 165 Phe Ser Thr Glu Ile Val Val Met Met Leu Phe Leu Thr Ile Leu Gly 180 185 Leu Gly Ser Ala Val Ser Leu Thr Ile Cys Gly Ala Gly Glu Glu Leu 205 195 200 Lys Gly Asn Lys Val Pro Glu Asp Arg Val Tyr Glu Glu Leu Asn Ile 215 220 Tyr Ser Ala Thr Tyr Ser Glu Leu Glu Asp Pro Gly Glu Met Ser Pro 225 230 235

Pro Ile Asp Leu

WO 01/21816

<210> 3 <211> 690 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (103)...(690) <221> intron <222> (640)...(1041) <223> Intron 5 <400> 3 aacccatttc aactgcctat tcagagcatg cagtaagagg aaatccacca agtctcaata taataatatt ctttattcct ggacagctcg gttaatgaaa aa atg gac aca gaa 114 Met Asp Thr Glu agt aat agg aga gca aat ctt gct ctc cca cag gag cct tcc agt gtg Ser Asn Arg Arg Ala Asn Leu Ala Leu Pro Gln Glu Pro Ser Ser Val 5 cct gca ttt gaa gtc ttg gaa ata tct ccc cag gaa gta tct tca ggc Pro Ala Phe Glu Val Leu Glu Ile Ser Pro Gln Glu Val Ser Ser Gly aga cta ttg aag tcg gcc tca tcc cca cca ctg cat aca tgg ctg aca 258 Arg Leu Leu Lys Ser Ala Ser Ser Pro Pro Leu His Thr Trp Leu Thr 40 gtt ttg aaa aaa gag cag gag ttc ctg ggg gta aca caa att ctg act 306 Val Leu Lys Lys Glu Gln Glu Phe Leu Gly Val Thr Gln Ile Leu Thr 55 354 gct atg ata tgc ctt tgt ttt gga aca gtt gtc tgc tct gta ctt gat Ala Met Ile Cys Leu Cys Phe Gly Thr Val Val Cys Ser Val Leu Asp 70 att tca cac att gag gga gac att ttt tca tca ttt aaa gca ggt tat 402 Ile Ser His Ile Glu Gly Asp Ile Phe Ser Ser Phe Lys Ala Gly Tyr 85 90 cca ttc tgg gga gcc ata ttt ttt tct att tct gga atg ttg tca att 450 Pro Phe Trp Gly Ala Ile Phe Phe Ser Ile Ser Gly Met Leu Ser Ile 105 498 ata tct gaa agg aga aat gca aca tat ctg gtg aga gga agc ctg gga Ile Ser Glu Arg Arg Asn Ala Thr Tyr Leu Val Arg Gly Ser Leu Gly 120 125 gca aac act gcc agc agc ata gct ggg gga acg gga att acc atc ctg 546 Ala Asn Thr Ala Ser Ser Ile Ala Gly Gly Thr Gly Ile Thr Ile Leu 135 140 atc atc aac ctg aag aag agc ttg gcc tat atc cac atc cac agt tgc 594 Ile Ile Asn Leu Lys Lys Ser Leu Ala Tyr Ile His Ile His Ser Cys 155

WO 01/21816 PCT/US00/25877

	e Phe Glu T		ttt atg gct Phe Met Ala 175			642
			cta aga ttc Leu Arg Phe 190			690
gtaagaagcc	ctcttctcct	gttccatgaa	caccatcctt	ttctgtaact	tctattacac	750
			cagggagatg			810
			tctactgcaa			870
-			gtgtgtgtgt			930
			aggagatgct			990
			tcatttgttg			1050
			cttggtagtg			1110
			gttccagagg			1170
			gaagacccag			1230
			ctgattcaca tctattctct			1290 1350
-			tgtttctgct			1410
_	-		ctatttttct	_		1470
			aagcaagatt			1530
-			aaagttgagt	-	-	1590
			tagcattctt			1650
			cacagtcaca	_		1710
			accaccagtc			1770
			gcctgaatca			1830
atattatttg	cagattgaca	agtaggaagt	ggggaacttt	tattaagtta	ctcgttgtct	1890
			ttataagtgc			1950
tgtttagtga	aacatttgtg	aaaaaagaag	actaaattaa	gacctgagct	gaaataaagt	2010
gacgtggaaa	tggaaataat	ggttatatct	aaaacatgta	gaaaaagagt	aactggtaga	2070
ttttgttaac	aaattaaaga	ataaagttag	acaagcaact	ggttgactaa	tacattaagc	2130
			gttatgttga			2190
			cctttgggag			2250
			catagtgaaa			2310
			gtcacctgta			2370
			gcggaggttg			2430
			actccatctc			2490
			gaggaagagt			2550 2610
			caaagggaaa taaaatttga			2670
=			taacactcta			2730
			ataattggag			2790
			aacatgcatt			2850
			agaaaataag			2910
			tgataagcaa			2970
			atgcaaaagg			3030
			catttgcaaa			3090
			ttatgaatag			3150
			gaaaagatag			3210
ataagagtcc	tacagatgga	ctgaaaaaaa	tcagtctgag	agtattagtc	acaattaatg	3270
			caagattaaa			3330
			atcacacaac			3390
			ttccattctc			3450
			accctaccct			3510
			tattaatcac			3570
			ccaggacctc			3630
			cttttatttc			3690
			caatttatga			3750
tgagagttgc	cccaccctac	ctgcctttta	tagtacgccc	acctcaggca	yacacagagc	3810

WO 01/21816 PCT/US00/25877

-6-

```
acaatgctgg ggttctcttc acactatcac tgccccaaat tgtctttcta aatttcaact
                                                                     3870
tcaatgtcat cttctccatg aagaccactg aatgaacacc ttttcatcca gccttaattt
                                                                     3930
cttgctccat aactactcta tcccacgatg cagtattgta tcattaatta ttagtgtgct
                                                                     3990
tgtgacctcc ttatgtattc tcaattacct gtatttgtgc aataaattgg aataatgtaa
                                                                     4050
cttgatttct tatctgtgtt tgtgttggca tgcaagattt aggtacttat caagataatg
                                                                     4110
gggaattaag gcatcaataa a
                                                                     4131
      <210> 4
      <211> 195
      <212> PRT
      <213> Homo sapiens
      <400> 4
Met Asp Thr Glu Ser Asn Arg Arg Ala Asn Leu Ala Leu Pro Gln Glu
                                    10
Pro Ser Ser Val Pro Ala Phe Glu Val Leu Glu Ile Ser Pro Gln Glu
            20
                                25
Val Ser Ser Gly Arg Leu Leu Lys Ser Ala Ser Ser Pro Pro Leu His
                            40
                                                 45
Thr Trp Leu Thr Val Leu Lys Lys Glu Gln Glu Phe Leu Gly Val Thr
                        55
                                             60
Gln Ile Leu Thr Ala Met Ile Cys Leu Cys Phe Gly Thr Val Val Cys
                    70
                                        75
Ser Val Leu Asp Ile Ser His Ile Glu Gly Asp Ile Phe Ser Ser Phe
                85
                                    90
Lys Ala Gly Tyr Pro Phe Trp Gly Ala Ile Phe Phe Ser Ile Ser Gly
            100
                                105
Met Leu Ser Ile Ile Ser Glu Arg Arg Asn Ala Thr Tyr Leu Val Arg
                            120
                                                 125
Gly Ser Leu Gly Ala Asn Thr Ala Ser Ser Ile Ala Gly Gly Thr Gly
                                             140
                        135
Ile Thr Ile Leu Ile Ile Asn Leu Lys Lys Ser Leu Ala Tyr Ile His
                    150
                                        155
Ile His Ser Cys Gln Lys Phe Phe Glu Thr Lys Cys Phe Met Ala Ser
                165
                                    170
Phe Ser Thr Val Cys Ile Phe Phe Cys Val Gly Arg Leu Arg Phe Trp
                                185
Val Leu Met
        195
      <210> 5
      <211> 21
      <212> DNA
      <213> Homo sapiens
      <220>
      <223> PCR primer
      <400> 5
gtgcctgcat ttgaagtctt g
                                                                        21
      <210> 6
      <211> 20
      <212> DNA
      <213> Homo sapiens
      <220>
      <223> PCR primer
      <400> 6
```

tggatccttg gctgtgaatc

-7-

```
<210> 7
     <211> 1198
     <212> DNA
     <213> Homo sapiens
     <400> 7
tactaagagt ctccagcatc ctccacctgt ctaccaccga gcatgggcct atatttgaag
                                                                     60
ccttagatct ctccagcaca gtaagcacca ggagtccatg aagaagatgg ctcctgccat
                                                                    120
ggaatcccct actctactgt gtgtagcctt actgttcttc gctccagatg gcgtgttagc
                                                                    180
agtccctcag aaacctaagg tctccttgaa ccctccatgg aatagaatat ttaaaggaga
                                                                    240
qaatqtqact cttacatqta atqqqaacaa tttctttqaa qtcaqttcca ccaaatqqtt
                                                                    300
ccacaatggc agcctttcag aagagacaaa ttcaagtttg aatattgtga atgccaaatt
                                                                    360
tqaaqacaqt qqaqaataca aatqtcaqca ccaacaaqtt aatqaqaqtq aacctqtqta
                                                                    420
cctqqaaqtc ttcaqtqact ggctqctcct tcaqqcctct gctqaqqtqq tqatqqaqqq
                                                                    480
ccaqcccctc ttcctcaggt gccatggttg gaggaactgg gatgtgtaca aggtgatcta
                                                                    540
ttataaggat ggtgaagctc tcaagtactg gtatgagaac cacaacatct ccattacaaa
                                                                    600
tgccacagtt gaagacagtg gaacctacta ctgtacgggc aaagtgtggc agctggacta
                                                                    660
tgagtctgag cccctcaaca ttactgtaat aaaagctccg cgtgagaagt actggctaca
                                                                    720
attttttatc ccattqttqq tqqtqattct qtttqctqtq qacacaqqat tatttatctc
                                                                    780
aactcagcag caggtcacat ttctcttgaa gattaagaga accaggaaag gcttcagact
                                                                    840
tctqaaccca catcctaagc caaaccccaa aaacaactga tataattact caaqaaatat
                                                                    900
ttgcaacatt agttttttc cagcatcagc aattgctact caattgtcaa acacagcttg
                                                                    960
caatatacat agaaacgtct gtgctcaagg atttatagaa atgcttcatt aaactgagtg
                                                                   1020
aaactggtta agtggcatgt aatagtaagt gctcaattaa cattggttga ataaatgaga
                                                                   1080
1140
tataaaacca tgtaacagaa tgcttctgag taaaaaaaaa aaaaaaaaa aaaaaaaa
                                                                   1198
      <210> 8
      <211> 2363
      <212> DNA
      <213> Homo sapiens
ttggctctct gcaaccactg tctcctgggt tcaagcgatt ctcctgcctt agtctcccga
                                                                     60
gtagctggga ttacaggcac ccaccaccac gcccagctaa tttttgtatt tttagtagag
                                                                    120
acggggtttc actctgttgg ccaggctggt cttgaacacc tgacctcttg atctgcccac
                                                                   180
ctcagccacc caaagtgctg gaattacaag cgtgagtcac cgcacccggc catataagag
                                                                   240
attettaate teccataget etectgtttt attetgtate etetetgett aetgaetgae
                                                                   300
atgtggcttt agtctccctg agggtagaga ttattttctg tgctggggga ggcctaggag
                                                                   360
acagagtttg gatatggttt attgatgctc cctgtttcct ctcttcagac ttccatggag
                                                                    420
tcactgattc atcactttaa cttgtatact gagggctacc aagttcctcc aggagccaca
                                                                    480
tatactgcca ttgaggctcc caaggtaagg agaggagggg aaggaaaaga ccatatgtag
                                                                    540
agtaggtagc taaagataga tctttaacaa atagctcatt catcaatgat atataaaaca
                                                                    600
gaatgaatag aggttttgtt ggcagagaaa aatactcttc atgttaatac agagtcacac
                                                                    660
ccaaccttct tccttgaaca gggagagttt ggggtgtacc tggtggtctg atggcagcag
                                                                   720
ccgcccttat cqatqcaaqa tcaaggctcc tqqttttqcc catctqtaaq aatcaatccc
                                                                   780
agtaactata actccaatga attaaacctg accttggttg aggtttttat gaactcttct
                                                                   840
ttctcctccc accttgcaag tcttaactaa cattgttgcc atctcaatct ccctaggctg
                                                                    900
gtttggacaa gatgtctaag ggacacatgt tggcagatgt cgttgccatc ataggtacga
                                                                    960
ggcctattgt gtagtagagg tatcctagac aaaggagttc gggacgccca ctggggacag
                                                                   1020
aaggagaaca cttcctgttc accataggcc atggcatgga ctcgggtcct caatcttttg
                                                                   1080
1140
aacaggaaga taagtaacat cactttttc ctccatcctc tcacctaggt acccaagata
                                                                   1200
ttgtatttgg agaagtagat cggtgagcag gggagcagcg tttgatcccc cctgcctatc
                                                                   1260
agettettet gtggageetg tteeteactg gaaattggee tetgtgtgtg tgtgtgtgt
                                                                   1320
tgtgtgtgtg tgtgtgta tgttcatgta cacttggctg tcaggctttc tgtgcatgta
                                                                   1380
ctaaaaaagg agaaattata ataaattagc cgtcttcgcg cccctaggcc taaacttctg
                                                                   1440
```

gtatcttagt gtctcagtat cttagtgtcc ttcactcgga ctgtaaacct aagaatgttc

attaaccctc cattcctgtt agattcagtc aggtcttagc aatttttcct gctcgtctcc

accecettet etgactettg teettteeae ttetetatte ceaattteet etttegetea

1500

1560

PCT/US00/25877 WO 01/21816

-8-

		-			
gtcctccttg cccaaacctt	ctcagtgccc	acataacttg	gtaaaccact	caaatcaaga	1680
cctggggtaa agttgggagg	gaaagggcta	tagtggggtc	tgagggaatg	ttgacgggca	1740
gtttcacaca gataaatctc					1800
cactttggga ggccgaggcg	gatggatcac	ctgagatcag	gagttcaaga	ccagcctgat	1860
caacatggag aaaccccatc	tctactaaaa	atacaaaatt	agctgggcgt	ggtggtgcat	1920
gcctgtaatg ccagctactc					1980
tgcggtgagc cgagatggcg	ccattgcact	ccagcctggg	caacaaagca	agagtccgtc	2040
tcaaaaaaaa aaaaaaaaaa	aaaaatctga	accaggtgga	gtggaaaatg	gcagatgtag	2100
acagcctttc ctgagcgtga	gagtctcctc	attctgtggg	ttaggagttg	gtcattgaag	2160
ggctgacgct taagagccca	gatctcccaa	ctcccttagt	tggccttccg	ggagccgccc	2220
ggtctcttgt gcaggaaggg	gaaggggcca	aagcatgggg	gaaggcgtgg	caggaagagg	2280
gggactctgt ggtcagggaa	ctgctcgctg	agcacagctg	cacagtgctg	gctgtcagaa	2340
cggccgatct ccagcccaag	atg				2363
<210> 9					
<211> 708					
<212> DNA					
<213> Mus muscu	lus				
<400> 9					
atggacacag aaaataggag		_		-	60
agtgcacctg acattgaact					120
acatggcgga catttttgaa					180
ggtttgatat gcctttgttt					240
gatgaagaag tgcttttact					300
gttttgtctg gatttttgtc		-	_		360
ggcagcctgg gagcaaacat					420
atcctcaatc tgaccaataa	-	_	-		480
gacggctgct ttgtggcttc					540
atcctggcct tttgcagtgc					600
agtaaaaagg tcccagatga	_			accaatttac	660
agtgagttgg aagacaaagg	ggaaacatct	tctccagttg	attcataa		708